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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/587,972 | 08/03/2006 | Markus Schutte | 294000US0PCT | 7114 |
| 22850 | 7590 | 01/28/2008 | | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER WINKLER, MELISSA A | |
| | | | ART UNIT 1796 | PAPER NUMBER |
| | | | NOTIFICATION DATE 01/28/2008 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/587,972 | Applicant(s) SCHUTTE ET AL. | |
| | Examiner Melissa Winkler | Art Unit 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-24 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/4/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37

CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence

Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

Claim 13 is objected to because of the following informalities: Claim 13 depends upon Claim 1, a canceled claim. For the purpose of further examination, Claim 13 will be considered to depend upon Claim 12. However, appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 – 16 and 19 - 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,031,010 to Lin in view of WO 01/32735 to Parfondry et al.

Regarding Claims 12 and 14. Lin teaches an integral skin polyurethane foam prepared by the reaction of a polyisocyanate composition and an isocyanate reactive composition (Column 1, Line 60 – Column 2, Line 25). The polyisocyanate composition contains an isocyanate-terminated prepolymer obtained from the reaction of a polyisocyanate and polyether polyol (Column 1, Line 65 – Column 2, Line 2). The isocyanate reactive composition contains a high ethylene oxide capped polyether polyol, designated by Lin as the “second polyol” (wherein the “first polyol is used to prepare the isocyanate prepolymer). This “second polyol” is prepared by reaction of a bifunctional starter - such as propylene glycol, diethylene glycol, or dipropylene glycol – with ethylene oxide and propylene oxide (Column 5, Line 39 – 61 and Column 6, Lines 45 - 60). Lin teaches that 75% by weight of the ethylene oxide is present at the end

of the polyol, i.e. as an end cap (Column 6, Lines 60 – 63). The isocyanate reactive composition contains an additional polyol designated as the “copolymer.” The “copolymer” may be prepared from ethylene oxide, propylene oxide, and a trifunctional initiator. The copolymer is preferably 65% to 85% by weight ethylene oxide. (Column 7, Lines 1 - 18). The isocyanate reactive composition further contains a chain extending agent (Column 2, Lines 9 – 10).

Lin does not teach the “second polyol” contains ethylene oxide in the claimed range. However, Parfondry et al. also teaches a polyurethane foam prepared from an isocyanate reactive composition containing a polyol designated as “b1,” prepared from propylene oxide (“PO”) and ethylene oxide (“EO”). Polyol “b1” may be have tipped/capped with ethylene oxide and has an ethylene oxide content of greater than 50% by weight (Page 6, Lines 6 – 10). Polyol “A” used in the examples is one such “b1” polyol with an ethylene oxide content 75% by weight (Page 10, Lines 3 – 6). Lin and Parfondry et al. are analogous art as they are from the same field of endeavor, namely flexible polyurethane foams. At the time of invention, it would have been obvious to a person of ordinary skill in the art to prepare the “second polyol” taught by Lin with an ethylene oxide content in the range taught by Parfondry et al. The motivation would have been that polyols rich in ethylene oxide can be used to produce highly resilient foams (Parfondry et al., Column 1, Lines 6 - 8).

Lin is also silent regarding the amount of ethylene oxide present as an end cap in the "copolymer." However, Parfondry et al. teach the isocyanate reactive composition containing polyol "b1" also contains polyol "b2," a polyol prepared from propylene oxide and ethylene oxide. The tipped/capped ethylene oxide content in Polyol "b2" may be 10 – 20% by weight (Page 6, Lines 11 – 29). At the time of invention, it would have been obvious to a person of ordinary skill in the art to prepare the "copolymer" taught by Lin with a tipped/capped ethylene oxide content in the range taught by Parfondry et al. The motivation would have been that the tipped/capped ethylene oxide content taught by Parfondry et al. would provide for a polyol with enhanced reactivity with isocyanate.

Regarding Claim 13. Lin teaches the foam of Claim 12 wherein the isocyanate-reactive composition comprise about 20% to about 80% by weight "second polyol," about 1.5% to about 23% by weight "copolymer," and about 6% to about 12.5% by weight chain extending agent (Column 7, Lines 31 – 39 and Column 2, Lines 9 – 10).

Regarding Claim 15. Lin teaches the foam of Claim 12 but is silent regarding the claimed properties. Consequently, the Office recognizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s). Therefore, the claimed effects and physical properties - i.e. a shore hardness in the range of 20 – 90 A, a tensile strength of

up to 20 N/mm², an elongation of up to 800%, and a tear propagation resistance up to 45 N/mm - would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Regarding Claim 16. Lin teaches the foam of Claim 12 wherein the foam may prepared with additives like mica and wollastonite, both sheet silicates (Column 11, Lines 60 – 67).

Regarding Claims 19 and 20. Lin teaches the foam of Claim 12 as a unit shoe sole with a density of 0.1 to about 1.1 spg (about 100 g/L - 1000 g/L) (Column 12, Line 56 – Column 13, Line 3).

Regarding Claims 21 - 24. Lin teaches the foam of Claim 12 as a unit shoe sole (Column 12, Line 56 – Column 13, Line 3).

Lin does not expressly quantify the level of swelling in the shoe sole. Consequently, the Office recognizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s). Therefore, the claimed effects and physical properties, i.e. the claimed swell-resistant properties, would implicitly be achieved by a composition with

all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,031,010 to Lin in view of WO 01/32735 to Parfondry et al, as applied to Claims 12 and 16 above, and further in view of US 2002/0193493 to Symons.

Regarding Claim 17. Lin teaches the foam of Claim 16 but does not teach the sheet silicates are exfoliated. However, Symons teaches a product prepared with vermiculite, a sheet silicate from the mica family (Paragraph 39). Lin and Symons are analogous art as they are from the same field of endeavor, namely compositions containing sheet silicate (mica) additives. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use exfoliated sheet silicates to prepare the foam taught by Lin. The motivation would have been exfoliated vermiculite is cited by Symons as a preferred additive for preparing final products with enhanced dimensional stability and shock resistance (Paragraphs 33 and 39), both properties that

would be desirable in a foam for shoe soles as indicated by Lin (Column 12, Lines 56 - 64).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,031,010 to Lin in view of WO 01/32735 to Parfondry et al.

Regarding Claim 18. Lin teaches a process for preparing an integral skin polyurethane foam in which a polyisocyanate composition and an isocyanate reactive composition are reacted (Column 1, Line 60 – Column 2, Line 25). The polyisocyanate composition contains an isocyanate-terminated prepolymer obtained from the reaction of a polyisocyanate and polyether polyol (Column 1, Line 65 – Column 2, Line 2). The isocyanate reactive composition contains a high ethylene oxide capped polyether polyol, designated by Lin as the “second polyol” (wherein the “first polyol is used to prepare the isocyanate prepolymer). This “second polyol” is prepared by reaction of a bifunctional starter - such as propylene glycol, diethylene glycol, or dipropylene glycol – with ethylene oxide and propylene oxide (Column 5, Line 39 – 61 and Column 6, Lines 45 - 60). Lin teaches that 75% by weight of the ethylene oxide is present at the end of the polyol, i.e. as an end cap (Column 6, Lines 60 – 63). The isocyanate reactive composition contains an additional polyol designated as the “copolymer.” The “copolymer” may be prepared from ethylene oxide, propylene oxide, and a

trifunctional initiator. The copolymer is preferably 65% to 85% by weight ethylene oxide. (Column 7, Lines 1 - 18). The isocyanate reactive composition further contains a chain extending agent (Column 2, Lines 9 - 10).

Lin does not teach the "second polyol" contains ethylene oxide in the claimed range. However, Parfondry et al. also teaches a polyurethane foam prepared from an isocyanate reactive composition containing a polyol designated as "b1," prepared from propylene oxide ("PO") and ethylene oxide ("EO"). Polyol "b1" may be have tipped/capped with ethylene oxide and has an ethylene oxide content of greater than 50% by weight (Page 6, Lines 6 - 10). Polyol "A" used in the examples is one such "b1" polyol with an ethylene oxide content 75% by weight (Page 10, Lines 3 - 6). Lin and Parfondry et al. are analogous art as they are from the same field of endeavor, namely flexible polyurethane foams. At the time of invention, it would have been obvious to a person of ordinary skill in the art to prepare the "second polyol" taught by Lin with an ethylene oxide content in the range taught by Parfondry et al. The motivation would have been that polyols rich in ethylene oxide can be used to produce highly resilient foams (Parfondry et al., Column 1, Lines 6 - 8).

Lin is also silent regarding the amount of ethylene oxide present as an end cap in the "copolymer." However, Parfondry et al. teach the isocyanate reactive composition containing polyol "b1" also contains polyol "b2," a polyol prepared from propylene

oxide and ethylene oxide. The tipped/capped ethylene oxide content in Polyol "b2" may be 10 – 20% by weight (Page 6, Lines 11 – 29). At the time of invention, it would have been obvious to a person of ordinary skill in the art to prepare the "copolymer" taught by Lin with a tipped/capped ethylene oxide content in the range taught by Parfondry et al. The motivation would have been that the tipped/capped ethylene oxide content taught by Parfondry et al. would provide for a polyol with enhanced reactivity with isocyanate.


Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Winkler whose telephone number is (571)270-3305. The examiner can normally be reached on Monday - Friday 7:30AM - 5PM E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MW
January 22, 2008


MARK EASHOO, PH.D.
SUPERVISORY PATENT EXAMINER
22/JAN/08